UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,117	01/23/2001	John C. Adler	M-8164 US	3321

			EXAMINER
33031	7590	05/12/2004	TON, ANTHONY T

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ART UNIT	PAPER NUMBER
2661	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)	
Office Action Summary		09/768,117	ADLER, JOHN C.	
		Examiner	Art Unit	
		Anthony T Ton	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 January 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 2.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____ .

DETAILED ACTION

Claim Objections

1.   **Claims 9, 23 and 38** are objected to because of the following informalities:

In the Claims: Term "a **protocol** processor" in lines 1-2 is not proper.

Examiner suggests changing this term to "a **processor**".

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   **Claims 1, 2, 4-7, 11, 15, 16, 18-21, 25, 29-31, 33-36, 40, 44, 45, 47-49 and 51** are

rejected under 35 U.S.C. 102(e) as being anticipated by **Oliva et al** (US Patent No. **6,654,802**).

a) **In Regarding to Claim 15**: **Oliva disclosed** an apparatus disposed in a

communication system, the apparatus comprising:

means for transmitting data in a transport overhead field to at least one network element

(see Fig.11: ports 52 and 58, register 72, and link 100 (means for transmitting data), blocks 42

and 44 (network elements); see col.5 lines 33-39: the network element and port identifiers are

obtained from the memory resources of network elements 22 or 24 and are inserted into the

overhead of one or more frames of data; and see col.9 lines 56-65: for transmission as section

trace bytes (transport overhead field)), the data providing a source identifier and a destination

identifier *(see col.10 lines 18-27: The information (data) is used to determined associations between networks elements 42 and 44. Registers 72 associated with connected ports 52 and 58 includes source identifiers 64, 66, and 68, 70, respectively and destination identifiers 68, 70, and 64, 66, respectively)*; and

means for using the data in the transport overhead field to provide end-to-end services *(see Fig.11: block 46 (means for using the data); see Fig.10: block 86 Path Overhead (this can be used for end-to-end services); and see col.7 line 66-col.8 line27: the network element and port identifiers are transmitted from source node to the destination node using SONET section trace bytes (hence end-to-end services))*.

b) **In Regarding to Claim 16: Oliva further disclosed** wherein the transport overhead field is a J1 field in a SONET communication packet *(see col.9 lines 18-55: The path trace byte J1 is defined from ANSI T1.105; and see Fig.10: block Trace J1)*.

c) **In Regarding to Claim 18: Oliva further disclosed** means for applying a routing protocol to read the source identifier and the destination identifier *(see Fig.11: blocks 46 and 48; and see col.6 lines 51-63: Management system 46 either obtains or reads network element identifier 66 and 70 from network elements 42 and 44, respectively)*.

d) **In Regarding to Claim 19: Oliva further disclosed** wherein end-to-end services includes one or more routing, provisioning, and restoration of functions *(see col.2 lines 21-29: telecommunication network functions, circuit provisioning, and restoration of failed connections; and see col.3 lines 16-23: each port in a network has local knowledge of the identity of the corresponding port and network element at the far end of the physical link (hence routing function for end-to-end services))*

e) **In Regarding to Claim 20**: **Oliva further disclosed** wherein end-to-end services are

path level services of a SONET communication network *(see Fig.11: block NE-NE Connection*

Fiber or WDM (SONET)).

f) **In Regarding to Claim 21**: **Oliva further disclosed** wherein the apparatus includes a

communication circuit disposed in one of a SONET and SDH *(see Fig.11: block 42 or block 44*

(a communication circuit); and see col.9 lines 56-65: SONET).

g) **In Regarding to Claim 25**: **Oliva further disclosed** wherein the data providing the

source identifier and the destination identifier avoids manual point-to-point routing of STS-Ns

(see col.2 lines 37-38: Automatic discovery of the network topology without entry (avoids

manual) of the topology may be provided; and see col.3 lines 1-4: automatic discovery of

network topology (hence avoids manual); and see col.10 lines 18-36: source identification,

destination identification, and auto-discovery process through correlation of identifiers; and see

Fig.8: STS-Nc).

h) **In Regarding to Claims 1, 2, 4-7 and 11**: These claims are rejected for the same

reasons as Claims 15, 16, 18-21 and 25, respectively because the apparatus in Claims 15, 16, 18-

21 and 25 can be used to practice the method steps of Claims 1, 2, 4-7 and 11, respectively.

i) **In Regarding to Claim 29**: **Oliva disclosed** a method for data communications

systems as recited in Claim 1. This method can be applied to reject this claim for the same

reasons as claim 1 because it is well known in the art that method steps can be programmed to

automate a process. The computer product program is considered as firmware that the apparatus

uses to perform the method steps.

j) **In Regarding to Claims 44, 45, 47-49 and 51**: These claims are rejected for the same

reasons as Claims 15, 16, 18-20 and 25, respectively because the apparatus for transmitting data

as recited in Claims 15, 16, 18-20 and 25 is the reverse apparatus for receiving data as recited in

Claims 44, 45, 47-49 and 51, respectively.

k) **In Regarding to Claims 30, 31, 33-36 and 40**: These claims are rejected for the same

reasons as Claims 1, 2, 4-7 and 11, respectively because the method for transmitting data as

recited in Claims 1, 2, 4-7 and 11 is the reverse method for receiving data as recited in Claims

30, 31, 33-36 and 40, respectively.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 3, 10, 17, 24, 32, 39, 46 and 50** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Oliva et al** (US Patent No. **6,654,802**) in view of **Hosler et al** (US Patent

Application Publication No. **2002/0009048**).

a) **In Regarding to Claim 17**: **Oliva disclosed** all aspects of this claim as set forth in

claims 15 and 16.

Oliva failed to explicitly disclose wherein the J1 field includes the source identifier and

the destination identifier.

Hosler disclosed such a J1 includes the source identifier and the destination identifier *(see sections [0042]-[0043] in pages 4-5: Using the J1 bytes, a local path terminating equipment "PTE" injects identifying signature data, such as bit string, into a frame for transmission, wherein the bit string identifies the transmitting router (hence source identifier) and PTE (hence destination identifier))*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a J1 includes the source identifier and the destination identifier throughout the J1 field of Oliva, as taught by Hosler in order to provide end-to-end services in a communications network, **the motivation being** to utilize more bandwidth.

b) **In Regarding to Claim 24: Oliva disclosed** all aspects of this claim as set forth in claim 15.

Oliva failed to explicitly disclose wherein the data further includes one or more of transport identification data, Internet Protocol addresses, Common Language Location Information data, and request for bandwidth.

Hosler disclosed such an Internet Protocol addresses *(see sections [0030] and [0036] in pages 3 and 4, respectively: (IP) maintains one or more routing tables. The routing tables associate with outgoing interfaces with destination addresses, the SONET/SDH system shown in Fig.1 is a network following an Internet Protocol (IP)).*

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such an Internet Protocol (IP) addresses throughout the J1 field of Oliva, as taught by Hosler in order to exchange packets between two peer entities via a

computer network, **the motivation being** to utilize packet format for a network layer in

communications networks.

c) **In Regarding to Claims 3 and 10**: These claims are rejected for the same reasons as

Claims 17 and 24, respectively because the apparatus in Claims 17 and 24 can be used to practice

the method steps of Claims 3 and 10, respectively.

d) **In Regarding to Claims 46 and 50**: These claims are rejected for the same reasons as

Claims 17 and 24, respectively because the apparatus for transmitting data as recited in Claims

17 and 24 is the reverse apparatus for receiving data as recited in Claims 46 and 50, respectively.

e) **In Regarding to Claims 32 and 39**: These claims are rejected for the same reasons as

Claims 46 and 50, respectively because the apparatus in Claims 46 and 50 can be used to practice

the method steps of Claims 32 and 39, respectively.

6.   **Claims 8, 9, 12-14, 22, 23, 26-28, 37, 38, 41-43 and 52-54** are rejected under 35 U.S.C.

103(a) as being unpatentable over **Oliva et al** (US Patent No. **6,654,802**) in view of **Martin et al**

(US Patent No. **5,841,760**).

a) **In Regarding to Claim 22**: **Oliva disclosed** all aspects of this claim as set forth in

claims 15 and 21.

Oliva failed to explicitly disclose wherein the communication circuit is implemented as

a line card.

Martin disclosed such a line card *(see Fig 6: block 40 or block 50; and see col4.line 50-*

col.5 line19: The line layer, the line overhead (LOH); which is used to monitor a line card).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a line card throughout a network element of Oliva, as taught by Martin in order to provide line-to-line communication in a SONET network, **the motivation being** to provide sufficient performance information.

b) **In Regarding to Claim 23**: **Oliva disclosed** all aspects of this claim as set forth in claims 15 and 21.

Oliva failed to explicitly disclose wherein the communication circuit is a processor

Martin disclosed such a processor *(see Fig.6: blocks processor)*.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement such a processor throughout the network management system 46 of Oliva, as taught by Martin in order to control the communications in a SONET network, **the motivation being** to utilize performance more efficiently.

c) **In Regarding to Claim 26**: **Oliva disclosed** all aspects of this claim as set forth in claim 15.

Oliva failed to explicitly disclose the apparatus further comprising: means for applying a wavelength routing protocol to the data in the transport overhead field to provide end-to-end services, the wavelength protocol locating new paths for communication.

Martin disclosed such means for applying a wavelength routing protocol to the data in the transport overhead field to provide end-to-end services, the wavelength protocol locating new paths for communication *(see Fig.3A: blocks 2, 4, 6 and 8 "Tr. Node" and blocks 43-46 "Sp/Co" (means for applying a wavelength. In which, the wavelengths λ_i "i = 1-8" that can be located new paths as shown in the figure)*

It would have been obvious to one having ordinary skill in the art at the time the

invention was made to implement such means for applying a wavelength routing protocol to the

data in the transport overhead field to provide end-to-end services, the wavelength protocol

locating new paths for communication throughout the fiber or WDM link of the NE-NE

connection as shown at link 100 in Fig.11 of Oliva, as taught by Martin in order to provide a

restoration if a communication link in a network failed, **the motivation being** to provision an

efficient restoration.

        d) **In Regarding to Claim 27: Oliva disclosed** all aspects of this claim as set forth in

claim 15.

        Oliva failed to explicitly disclose an intelligent software system in combination with the

wavelength routing protocol determined end-to-end routing automatically.

        Martin disclosed such an intelligent software system in combination with the

wavelength routing protocol determined end-to-end routing automatically *(see col.5 lines 25-67:*

Trace byte J1 is used to identify that the correct connection was made between two end points of

the path (hence, end-to-end routing); it is a user programmable byte (intelligent software) that

respectively transmits a 64-byte fixed length string so that a receiving terminal in a path can

verify its continued connection to the intended transmitter WDM (wavelength division

multiplexing) λ_1-λ_8 (hence wavelength protocol); and see col.7 lines 39-44: the line AIS and line

RDI indications also pass through automatically (hence routing automatically)).

        It would have been obvious to one having ordinary skill in the art at the time the

invention was made to implement such an intelligent software system in combination with the

wavelength routing protocol determined end-to-end routing automatically throughout the fiber or

WDM link of the NE-NE connection as shown at link 100 in Fig.11 of Oliva, as taught by Martin

in order to provide a restoration if a communication link in a network failed, **the motivation**

being to provision an efficient restoration.

e) **In Regarding to Claim 28**: **Oliva further disclosed** wherein the wavelength protocol

locates new paths for communication manually *(see col.2 lines 30-31: network topology*

(protocol) is typically **manually entered** *into a record for use by a management system; and* see

col.6 lines 31-44: Network element and port identifiers 64, 66, 68 and/or 70 are resident in

network element 42 and/or 44 or ports 52, 54, 56, 58, 60 and 62 when the device is

manufactured, **are entered manually through a local interface device** *at the time of installation*

(hence locates new paths manually)).

It would have been obvious to combine Oliva and Martin for the same reason as in

Claim 26.

f) **In Regarding to Claims 8, 9 and 12-14**: These claims are rejected for the same

reasons as Claims 22, 23 and 26-28, respectively because the apparatus in Claims 22, 23 and 26-

28 can be used to practice the method steps of Claims 8, 9 and 12-14, respectively.

g) **In Regarding to Claims 52-54**: These claims are rejected for the same reasons as

Claims 26-28, respectively because the apparatus for transmitting data as recited in Claims 26-28

is the reverse apparatus for receiving data as recited in Claims 52-54, respectively.

h) **In Regarding to Claims 41-43**: These claims are rejected for the same reasons as

Claims 52-54, respectively because the apparatus in Claims 52-54 can be used to practice the

method steps of Claims 41-43, respectively.

   i) **In Regarding to Claims 37 and 38**: These claims are rejected for the same reasons as

Claims 8 and 9, respectively because the method for transmitting data as recited in Claims 8 and

9 is the reverse method for receiving data as recited in Claims 37 and 38, respectively.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anthony T Ton whose telephone number is 703-305-8956. The

examiner can normally be reached on M-F: 8:00 am - 4:30 pm.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Douglas W Olms can be reached on 703-305-4703. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ATT
5/5/2004

KENNETH VANDERPUYE
PRIMARY EXAMINER